

Appl. No 10/645,764
Amdt. dated April 5, 2006
Reply to Office Action of January 6, 2006

REMARKS

Applicant has carefully reviewed the Office Action mailed January 6, 2006, in which claims 1-2, 6-8, 10, 12 and 17-18 are pending. Claims 1-2, 6, 8, 10, 12 and 17 have been rejected and claims 7 and 18 objected to. Favorable reconsideration is respectfully requested in light of the following comments.

Applicant respectfully traverses the Examiner's rejection of claims 1, 2, 6, 8, 10, 12 and 17 under 35 U.S.C. §102(b) as anticipated by Chien et al., U.S. Patent No. 5,891,114. In order to anticipate, the cited reference must disclose each and every claimed element. Chien et al. fail to do so.

Chien et al. pertain to "a catheter assembly having a number of sections, in which the flexibility of the various sections is controlled primarily by selection of the braid characteristics of those section." Column 7, lines 45-48. Chien et al. disclose three ways of modifying braid characteristics: "lowered ribbon density, braid ribbon composition, and pitch." Column 8, lines 39-40. Chien et al. describe these three ways in more detail with reference to the embodiment of Figure 2. With regard to lowered ribbon density, "weaving a superelastic alloy woven ribbon braid member and mechanically removing a number of those members to form the more flexible section of distal braid member." Column 10, lines 41-44. With regard to braid ribbon composition, "more proximal braid member (204) may be a single structure abutted by an independent but significantly more flexible distal braid (202). Distal braid (202) may, in this instance be made of a different material than is found in the members making up more proximal braid (204)." Column 10, lines 44-49. With regard to pitch, "distal braid (202) may have braid member spacing which becomes more spaced distally to promote distal flexibility." Column 10, lines 49-51.

Significantly for the purpose of this discussion, Chien et al. discuss braid members and ribbons at length (column 12, line 29 through column 13, line 20), and nowhere (in this section or any other) can Applicant find any teaching that the material or cross-sectional area or shape of a particular braid member can vary along its length.

Therefore, when discussing the embodiment of Figure 7, Chien et al. teach that "more distal ribbon braid (262) may either be an extension of ribbon braid (266) with some of its elements removed or distal ribbon braid (262) may be an independent braid of another material."

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placed distally of woven braid (266)" Chien et al are saying that the embodiment of Figure 7 may be constructed using either the first or the second of the three ways of varying the characteristics of different sections. Column 12, lines 24-28. As one can see from Figure 7, the distal section has half as many braid members as the proximal section, a result that can be accomplished by removing half the braid members from one continuous braid or by having two separate braids, the second of which having half as many braid members and the same pitch as the first braid.

When, discussing the embodiment of Figure 8, Chien et al. teach that "the inventive device is similar to that shown in FIG. 7" and that "[t]he most significant difference between the variation shown in FIG. 8 and that of FIG. 7 is found in the fact that the distal woven braid (282) is comprised of a wire rather than the ribbon braid (262) shown in FIG. 7," Chien et al. are pointing out the physical differences between the devices and are not suggesting that all the manufacturing techniques disclosed with regard to the Figure 7 embodiment may be employed in manufacturing the Figure 8 embodiment. It seems clear that only the second technique is appropriate with this embodiment (the second technique being having the more proximal braid member be abutted by an independent but significantly more flexible distal braid).

Thus claim 1, in reciting "[a] catheter braid formed from at least two continuous wires woven together...wherein each continuous wire extends through the proximal braid section and through the distal braid section, and for each continuous wire, *the distal cross-sectional area of said continuous wire is less than the proximal cross-sectional area of said continuous wire*" is not anticipated by Chien et al.

Claim 10, which recites "[a] catheter comprising...a reinforcing braid layer disposed over the inner layer, the braid layer formed from at least two continuous wires woven together...wherein each continuous wire extends through the proximal braid section and through the distal braid section, and *the distal cross-sectional area of each of the continuous wires is less than the proximal cross-sectional area of each of the continuous wires*," is likewise not anticipated by Chien et al.

In regard to the specific lines of Chien et al. cited in the Office Action, the material at column 10, lines. 34-44 discloses the three methods of varying the braid characteristics of different sections of the catheter discussed above, two of which (the first and third) include braid wires continuous throughout the proximal and distal sections. However, it is not taught that the

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cross-sectional area of the continuous wires vary at all. In the first method, some ribbon members extend continuously throughout both sections and some terminate proximal the distal section. In the third method, the pitch of the members varies.

Column 13, lines 55-57, to the extent they teach a continuous braid member, are simply another way of describing the first method where some, but not all, braid members terminate before the distal section.

And Chien et al. in saying in column 14, lines 55-56 that "FIG. 8 shows another variation...similar to that of FIG. 7" does not imply that each method that may be used in the manufacture of the Figure 7 embodiment may be used in the manufacture of the Figure 8 embodiment. Physical similarity is all that is implied, particularly in view of the description of how the Figure 8 embodiment varies from the Figure 7 embodiment.

Finally, in the Response to Arguments, it is asserted that "[t]hroughout its disclosure, Chien set forth that the catheter can have braid wires continuous throughout the catheter or of two butt-welded braided sections." That the catheter of Chien et al. can have braid wires continuous throughout the catheter is true but, as discussed above, irrelevant because those embodiments disclose braid wires of constant cross-section. The section assertion "of two butt-welded braided section" is false. Applicant has performed an electronic search of Chien et al. and nowhere is the word "weld" used. Further, Applicant has found no teaching in Chien et al. that two discontinuous sections of braid wires are ever joined. The closest teaching in Chien et al. seems to be in column 10, lines 44-46, where it is said that "more proximal braid member (204) may be a single structure *abutted* by an independent but significantly more flexible distal braid." *Abut*, of course, means nothing more than to touch end to end and in no way implies a joint.

Applicant therefore respectfully maintains that Chien et al. fail to describe the claimed braid in which there are at least two continuous wires, each wire having a proximal diameter or cross-sectional area and a smaller distal diameter or cross-sectional area. Therefore, Chien et al. cannot be considered as anticipatory. Favorable reconsideration is respectfully requested.

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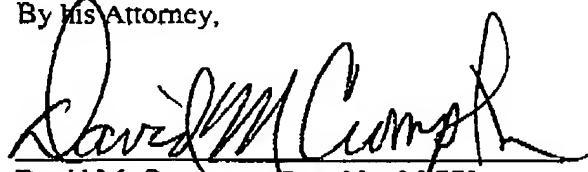
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Reexamination and reconsideration are respectfully requested. It is respectfully submitted that all pending claims are now in condition for allowance. Issuance of a Notice of Allowance in due course is requested. If a telephone conference might be of assistance, please contact the undersigned attorney at (612) 677-9050.

Respectfully submitted,

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By his Attorney,



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